UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/981,287	10/18/2001	Bernhard Dohrmann	59575-014	6542

36491 7590 06/22/2009

Kunzler & McKenzie
8 EAST BROADWAY
SUITE 600
SALT LAKE CITY, UT 84111

EXAMINER	
GISHNOCK, NIKOLAI A	

ART UNIT	PAPER NUMBER
3715	

MAIL DATE	DELIVERY MODE
06/22/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/981,287
Filing Date: October 18, 2001
Appellant(s): DOHRMANN, BERNHARD

Bruce R. Needham
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 3/30/2009 appealing from the Office action mailed 9/30/2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(**8) Evidence Relied Upon**

5,850,250	KONOPKA et al.	12-1998
6,034,652	FREIBERGER et al.	3-2000
6,647,119	SLEZAK	11-2003

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-4, 42-46, & 49-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Konopka et al. (US 5,850,250), hereinafter known as Konopka, in view of Freiberger et al. (US 6,034,652), hereinafter known as Freiberger.

Konopka teaches a computer implemented instructional information delivery system and method (workstation includes a personal computer to schedule classes, 8:40-42) comprising: at least one source that provides data, including an image capture device (front video cabinet with a document camera, 6:61-67), the data comprising instructional information (images of instructional materials are received by the document camera, 6:63-67) and background information (three video monitors for displaying video images of students in remote classrooms, 6:46-50); at least one user interface that receives input from a user (control panel to control all devices located in the room, 8:45-48), the input related to execution of the data (the teacher is able to switch between a rear camera and the document camera to control the display, 7:50-53); a plurality of output devices in a classroom that receives audio and visual components of

the data, wherein the plurality of output devices includes at least three visual displays that show at least three visual images (the front audio/video cabinet includes three Video Monitors, each for displaying a video image; 6:46-50; see also Figure 3, Items 201-204) and wherein display of the instructional information is controlled by an operator (teacher's workstation includes a control panel, for controlling audio/video functions, 8:42-50), and at least one processor that generates or routes audio and visual components from the instructional information and background information from provided data to at least one output device (CPU module for controlling audio/video functions, 8:46-48), and a computer-readable medium accessible by the processor and including a set of predetermined rules (personal computer and CODEC machine which converts the digital information from the network into video and audio signals which are then broadcast into the classrooms by monitors for displaying the signals, 3:61-4:3 & 8:38-56, also 9:33-10:4) comprising instructions for displaying instructional information selected by the operator until a triggering event occurs (teacher's workstation with a control panel, linked to the network and audio/video components in the classroom for presentations, 8:38-56; the teacher is able to switch between devices to control the display, 7:50-53; the switch operation is understood to be a triggering event); and communication links that transmit data and information between the at least one source, the user interface, the processor and the output devices (personal computer is linked to the network and audio video components, 8:42-45) [Claims 1, 59, & 67].

What Konopka fails to teach is where the display of the background information is controlled by an auto-switching algorithm, the background images displayed and replaced randomly by the auto-switching algorithm that controls selection, sequence, and duration of the display of the background images after expiration of a predetermined timeout period for displaying the instructional information [Claims 1, 42, 44, 59, & 67]. However, Freiberger

teaches where display of background information data (content data, making use of the unused capacity of a display device, and for presenting to a person during inactive periods, 2:3-34; content data includes clips, images, moving or still pictures, text, numerical information, or audio, 6:56-64), distinct from the instructional information (user's primary interaction with the computer; the information is presented in areas of a display screen that are not used by displayed information associated with the primary interaction with the apparatus. The information is embodied as one or more sets of content data, 2:16-21) is controlled by an auto-switching algorithm (A set or sets of instructions for enabling a display device to selectively display an image or images generated from a set of content data are also made available for use by the content display systems. Typically, the instructions enable images generated from content data to be displayed automatically, without user intervention, in a predetermined manner, thereby enhancing the capability of the invention to occupy the user's peripheral attention, 2:35-3:10); and generating and routing the background information from provided data to output devices (The formulation of a version of a set of content data could depend upon the operating system being used by the computer on which the content display system is implemented or other characteristics of the computer, such as the speed with which the display device can be operated, 16:23-50); and personal computer including instructions for displaying background images of the background information on one or more visual displays not displaying instructional information (a computer readable medium can be encoded with one or more computer programs for enabling a content display system to selectively display on a display device, in an unobtrusive manner that does not distract a person from a primary interaction with an apparatus associated with the display device, an image generated from a set of content data, 4:60-5:10) randomly by the auto-switching algorithm that controls selection, sequence, and duration of the display of the background images (The instructions of the computer program can

include: i) acquisition instructions for enabling acquisition of a set of content data from a specified information source, ii) user interface installation instructions for enabling provision of a user interface that allows a person to request the set of content data from the specified information source, iii) content data scheduling instructions for providing temporal constraints on the display of the image or images generated from the set of content data, and iv) display instructions for enabling display of the image or images generated from the set of content data, 4:31-41; it is understood that randomly displaying content is merely a scheduling instruction that can be provided to the attention manager), after expiration of a timeout period (The content data scheduling instructions can specify, for example, the duration of time that the image or images generated from a set of content data can be displayed, an order in which the images generated from a plurality of sets of content data are displayed, a time or times at which the image or images generated from a set of content data can or cannot be displayed, and/or constraint on the number of times that the image or images generated from a set of content data can be displayed, 4:47-55). The instructions for the attention manager of Freiberger would be used in the instructional display system of Konopka, in order to occupy the user's peripheral attention and to make use of the unused capacity of the display devices. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to display to at least one output device background information from provided content data, controlled by an auto-switching algorithm; the algorithm comprising instructions for displaying background images on displays not displaying instructional information, replaced randomly by the auto-switching algorithm by controlling selection, sequence, and duration of the display of the background images after expiration of a timeout period, in order to present content to provide content to the user during periods when a user is not engaged in intensive interaction {i.e. learning interactions} with the apparatus, in areas of the display not used by displayed

information associated with a user's primary interaction {i.e. instruction} with the apparatus, in an unobtrusive manner that does not distract the user from primary interaction with the apparatus [Claims 1, 42, 44, 59, & 67].

What Konopka further fails to teach is displaying the instructional information in a random pattern on one or more of the visual displays in response to the triggering event, wherein the random pattern comprises displaying the instructional information in a random sequence wherein the instructional information moves from one combination of one or more of the visual displays to another combination of one or more of the visual displays at a random interval, wherein a combination of the one or more visual displays comprises a number of the visual displays less than all of the visual displays [Claims 1, 59, & 67]; displaying random special effect transitions of the background images being displayed on each of the at least three visual displays [Claim 71], and wherein the auto- switching algorithm replaces displayed background images according to a random duration with random background images [Claim 74]. However, Freiberger teaches instructions for switching time between background images (determining an idle period or idle condition, via an idle timer or apparatus to ascertain a user's attention focus at predefined time intervals, at 8:37-9:43, then generating a display of a set of content data if an idle period is detected, at 9:44-10:42), and instructions for controlling display duration and special effects of the background images (package file can also include information governing the presentation of the set of content data, such as screen position, special animation effects, and display duration, 21:50-54). Freiberger further teaches where the content display system can include instructions for evaluating a Gaussian probability function each time a set of content data in the schedule is presented for display, either displaying the content or not, based on a consideration of a variety of factors (26:52-27:15). This probability display function is understood to be a random probability of displaying content. This probability

function taught by Freiberger would be evaluated by the content scheduler to control the idle period, display duration, and special animation effects of the content display, as used in the classroom instructional display system of Konopka. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have used the probability function of Freiberger to implement random switching times, display durations, and special effects of randomly-selected background images taught by Freiberger, in the instructional display system taught by Konopka, in order to optimize the use of the unused capacity of the display device and the viewer's attention [Claims 1, 45, 59, 67, 71, & 74].

Konopka teaches wherein said at least one source comprises at least one of VCR (4:24-27), DVD, cameras (3:48-52), audio tuners (microphone mixers, 9:37-41), Internet (data applications transmitted over T1 lines, 11:22-23) and PC-based presentations (8:42-45) [Claim 2].

Konopka teaches wherein said at least one predetermined rule determines order and sequence in which data from each source is to be applied to the output devices (in a normal operating mode, one of the video monitors will display the teacher, while the other monitors will display classroom images, 4:9-14) [Claim 3].

Konopka teaches wherein said input from a user determines which source provides data (video image received by the document camera may be selectively displayed on the first video monitor, and the teacher is able to switch between the rear camera and the document camera, 7:43-46) [Claim 4].

Konopka teaches wherein the at least one predetermined rule further includes displaying one or more of a student image of a student in the classroom and a teacher image on the display system on one of the at least three visual displays (one of the video monitors will display a video image of the teacher, 4:9-14) [Claim 46].

What Konopka further fails to teach is wherein the at least one predetermined rule further includes displaying background pictures during idle or transition periods on the display system on each of the at least three visual displays [Claim 49]. However, Freiberger teaches API instructions for the automatic display of background images on a computer display after detection of an idle period of predetermined duration (3:11-51). The instructions for determining the user's attention to the primary interaction taught by Freiberger would be used in the computer instruction system of Konopka in order to determine the appropriate timing to display background images on the display of Konopka, in order to optimize he user's attention to the instructional information and the background images. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to display background pictures during idle or transition periods on the display system on each of the at least three visual displays, as taught by Freiberger, on the three visual display devices of the instructional computer display system of Konopka, in order to present content to provide content to the user during periods when a user is not engaged in intensive interaction {i.e. learning interactions} with the apparatus, in areas of the display not used by displayed information associated with a user's primary interaction {i.e. instruction} with the apparatus, in an unobtrusive manner that does not distract the user from primary interaction with the apparatus [Claim 49].

Konopka teaches wherein the at least one predetermined rule further includes displaying previous information provided by the operator to reinforce the previous information on each of the at least three visual displays (video image received by the document camera may be selectively displayed on the first video monitor, 7:43-46) [Claim 50].

Konopka teaches wherein the at least one predetermined rule further includes displaying new information provided by the operator when the operator overrides the auto-switching algorithm on the display system on each of the at least three visual displays, and providing a

speaker override module that is configured to allow the operator to temporarily override display of the background images and to display selected material by the instructor (teacher is able to switch between a rear camera and the document camera to control the display of the first video monitor, 7:50-53) [Claims 51 & 65].

Konopka teaches wherein the rules further include displaying background images that are related to the instructional material being taught (video image received by the document camera may be selectively displayed on the first video monitor, 7:43-46) [Claims 52 & 60].

Konopka teaches wherein the rules further include displaying background images that are unrelated to the instructional material being taught (three monitors display video images of three remote classrooms, 4:9-14) [Claims 53 & 61].

Konopka teaches wherein the unrelated background images are selected from the group of pictures consisting of: animals, forests, rivers, clouds, mountains, art work, people, buildings, vehicles, tools, plants, minerals, geological items, scenic sights, maps, cartoon images, segments of movies, segments of videos, and web site images (three video monitors display a video image of students in a classroom, 6:46-50; the students are inherently people, and the video image inherently a segment of video) [Claims 54 & 62].

What Konopka fails to teach is wherein the unrelated background images are selected from the group of pictures consisting of: books, astronomy images, zoology items, biology items, historical items, futuristic information, economical information, financial information, statistical information, science fiction, fiction, scientific information, and theological information [Claims 55 & 63], and wherein the related background images are selected from the group of pictures consisting of: books, astronomy related images, mathematical related images, zoology related items, biology related items, historical related items, futuristic related information, economical related information, financial related information, statistical related information, science fiction

related information, fiction related information, scientific related information, and theological related information [Claims 56 & 64]. However, Freiburger teaches where the background content data includes moving and still images of nature scenes, pictures of family members, music video segments, video from a camera monitoring ski slopes or traffic intersections, financial data, such as stock ticker information, or news summaries (7:23-38). The financial data of Freiburger is understood as financial information and financial related information. The background images and video as taught by Freiberger would be displayed by the processor selectively on the display devices of Konopka, for engaging the peripheral attention of the students. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have displayed financial information as the unrelated background images, as taught by Freiberger, on the three displays in the computer-based instructional system of Konopka, in order to present content to provide content to the user during periods when a user is not engaged in intensive interaction {i.e. learning interactions} with the apparatus, in areas of the display not used by displayed information associated with a user's primary interaction {i.e. instruction} with the apparatus, in an unobtrusive manner that does not distract the user from primary interaction with the apparatus [Claims 55, 56, 63, & 64].

Konopka teaches wherein the three visual displays are viewable on a single display screen incorporating at least three separate visual images thereon (the first video monitor displays either a video image of the teacher or instructional material, and is larger than the other monitors, 6:33-44) [Claims 57 & 66].

Konopka teaches wherein the three visual displays are viewable on three distinct display screens (three video monitors, each for displaying a video image of students, 6:46-50) [Claim 58].

Konopka teaches wherein the user interface includes a screen and an input device (workstation includes a personal computer and control panel to control all devices located in the room, Abstract & 8:42-50) [Claim 68].

Konopka teaches wherein the source includes a microphone (student microphones, 9:33-34) [Claim 69].

Konopka teaches wherein the computer-readable medium includes instructions for enabling the operator to enter direction regarding image display through the user interface and instructions for carrying out such direction (remote controller, such as a joystick, for controlling the pan, tilt, and zoom system, for aiming and focusing a camera, 4:30-41) [Claim 70].

What Konopka further fails to teach is wherein the auto-switching algorithm replaces displayed background images with varying patterns selected with table driven timeouts, and the auto-switching algorithm randomly moves the instructional information after the triggering event with the table-driven time outs [Claim 72], and wherein the table-driven timeouts preclude duplication of image pattern to a minimum frequency [Claim 73]. However, Freiberger teaches a content display system which stores a display schedule for background images in a database (Once the order and duration of display are established, the sets of content data are repetitively displayed by cycling through the display schedule repeatedly until operation of the attention manager is terminated. The display schedule can also accommodate scheduling parameters that delete sets of content data from the display schedule during particular iterations, thereby, for example, controlling the frequency with which particular sets of content data are displayed. The display schedule can be stored in an appropriately structured database that is stored in a memory of the computer used to implement the content display system, 10:37-50). The database for storing the content data display schedule is understood to be a table, controlling the timeout period after which a particular content image is removed from display or no longer

displayed. See also Freiburger at 28:40-29:45. Cycling the display of the content is understood to be moving the instructional information, based on the table-driven time out data. The database of Freiberger for scheduling the display of content taught by Freiberger would be used to automatically switch the background images in the instructional display system of Konopka. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have the auto-switching algorithm replace displayed background images with varying patterns selected with table-driven timeouts, where the auto-switching algorithm randomly moves the instructional information after the triggering event with the table-driven time outs, which preclude duplication of image pattern to a minimum frequency, as taught in Freiberger, in the instructional display system of Konopka, in order to record audit or usage data, indicating the frequency and duration for which the user's attention was directed to each piece of content, for the benefit of the operator or a content distributor [Claims 72 & 73].

What Konopka further fails to teach is wherein the auto-switching algorithm selects input sources for the background information supplying the background images [Claim 75]. However, Freiberger teaches an auto-switching algorithm to selectively display images generated from one or more sets of content data (7:7-22; see also content providing systems, 16:17-22). The selection of input sources by the auto-switching algorithm of Freiberger could be programmed into the computer-based instructional system of Konopka. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have the auto-switching algorithm of Freiberger to select input sources for the background information, as a feature in the system of Konopka, in order to allow the automatic scheduling of original, updated, and interesting content on the display screen [Claim 75].

What Konopka further fails to teach is an operator override for the auto-switching algorithm for one or more visual displays, wherein the triggering event comprises receiving a

command from the operator [Claims 43 & 76]. However, Freiberger teaches where an attention manager is activated by explicit direction from the user, such as by an on-screen icon or menu selection (9:30-45). Freiberger further teaches where the attention manager can be terminated if the user makes an input to the computer using an input device (11:42-67). The operator override for the auto-switching algorithm of Freiberger could be programmed into the computer-based instructional system of Konopka. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have the operator override of Freiberger as a feature in the system of Konopka, in order to allow the operator to select the primary interaction when he/she desires to refocus the student's attention manually [Claims 43 & 76].

What Konopka further fails to explicitly teach is wherein the auto-switching algorithm [Claim 77] or the operator [Claim 78] changes display of the instructional material from one set of the one or more of the at least three visual displays to another set of one or more of the at least three visual displays and wherein the auto-switching algorithm moves the background images of the background information to one or more visual displays not displaying instructional information [Claims 77 & 78]. However, Konopka teaches an instructional display device having three or more visual displays (6:46-50; also Figure 3, Items 201-204) and wherein display of the instructional information is controlled by an operator, who moves background images to displays not displaying instructional information (7:50-53). Further, Freiberger teaches the use of an auto-switching algorithm for the display of instructional material (2:35-3:10). Including another set of one or more displays is construed as a mere duplication of parts, which fails to patentably distinguish over Konopka and Freiberger, because the auto-switching algorithm would treat another set of displays merely as more displays. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, for the auto-switching algorithm or

the operator to change display of the instructional material from one set of the one or more of the at least three visual displays to another set of one or more of the at least three visual displays, wherein the auto-switching algorithm moves the background images of the background information to one or more visual displays not displaying instructional information, in the system of Konopka, in light of the teachings of Freiburger, in order to provide more displays for additional content on which a student's attention can be further focused [Claims 77 & 78].

Claims 7, 11, 12, 47, & 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Konopka, in view of Freiberger, as applied to claim 1 above, and further in view of Slezak (US 6,647,119), hereinafter known as Slezak.

Konopka and Freiberger teach all the features of claim 1 as demonstrated above. What Konopka and Freiberger fail to expressly teach is wherein each of the three display screens is divided into a plurality of viewing areas in a predetermined pattern [Claim 7], or two or more unequal viewing areas [Claim 11], or a plurality of viewing areas in a pattern different from the other screens [Claim 12], or wherein displaying the instructional information in a random pattern further comprises displaying the instructional information in a random pattern for a predetermined period of time, wherein one of background images and additional instructional information is displayed after the predetermined period of time [Claim 47], or wherein first instructional information is displayed in a random pattern along with second instructional information, wherein the first instructional information is displayed with a first random pattern and a second instructional information is displayed with a second random pattern [Claim 48]. However, Slezak teaches a presentation device that displays some or all of the participants in isolated quadrants of the screen display (Column 6, Lines 48-55) [Claim 7]. Slezak teaches information being of a length that would be adjusted by scroll bars, in which it is inherently

unequal to the length of the screen (Column 7, Lines 22-29) [Claim 11]. Slezak also teaches the use of MICROSOFT WINDOWS NT® or WINDOWS 95® visual interface, in which a plurality of adjustable windows may be customized on different user's screens (Column 8, Lines 54-57) [Claim 12]. The personal computer based system for controlling instructional displays of Konopka, using an operating system having a screensaver, wallpaper, or background API (Application Programming Interface), as taught by Freiberger (at 8:28-31 & 9:11-21), would have access to the user interface programming elements taught by Slezak. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have adapted the plurality of unequal viewing areas on different screens in a predetermined pattern, or displaying instructional information from multiple sources in randomly chosen patterns, as taught by Slezak, into the instructional delivery device of Konopka and Freiberger, in order to display separate visual cues relevant to one another to a student on a monitor [Claims 7, 11, 12, 47, & 48].

(10) Response to Argument

I. The rejections of claims 1-4, 42-46, and 49-78 under 35 USC §103(a) in view of Konopka and Freiberger teach every element of the claims.

Appellant argues that Konopka fails to teach displaying instructional information on the visual displays in the classroom; however, Konopka explicitly teaches video monitors for displaying the teacher, students in classrooms, and materials such as books, pictures, and overhead transparencies, as directed by the teacher (3:34-60 and 4:58-65). What Konopka fails to teach explicitly is displaying classroom images and materials on random displays, and at random intervals and for random durations; Freiberger, though, teaches an attention manager algorithm for displaying informational content according to scheduling instructions, which

evaluate a probability function to determine when to display a set of content data (26:52-27:15). The probability function can include a number of factors, such as duration of time since the content was updated and a user's like or dislike for the content; the probability function in turn evaluates to the likelihood that the set of content will be displayed at the time the function is evaluated. Because Konopka's CODEC machine is a personal computer-based system, it is reasonable to consider merely installing software such as Freiberger's attention manager algorithm in Konopka's system to follow instructions stored in a content scheduling database. Freiberger's scheduling algorithm would evaluate probability functions to determine the timing of switching content on each screen of Konopka, in the event that the teacher desires to automatically and randomly present such additional aesthetic or entertainment content in an unobtrusive manner that does not distract the students from the primary instructional interaction in areas of the display not used by the primary interaction. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have used the attention-managing concept of wallpapers taught by Freiberger in the computer-based presentation apparatus of Konopka, in order to relieve the mind of a student temporarily without distracting the student from the primary instruction.

Appellant argues that Konopka never teaches where instructional material is displayed on all the monitors; however, this accusation is simply without regard to the premise of nonfunctional descriptive materials. Konopka teaches displaying teachers, classrooms, and instructional documents on all of its displays. As such, it is clear from Konopka that this material is all used in the instruction of students, thus it is instructional material. Further, it is plausible for Konopka to display teaching documents on all the displays if a teacher so desired, in case teacher wished the students to compare multiple documents side-by-side. Additionally, Appellant's own teaching of instructional content encompasses images of the instructor's face

and students' images from a camera (Specification at page 12, line 16 through page 13, line 2). It is clear then that Appellant's argument is incorrect because the instant invention understands pictures of people to be displayed on some of the screens; thus, such content must be included in what he regards as instructional material.

Appellant admits that Konopka teaches a user's switching between a teacher image, a document image, and a video image, but argues that the teacher's switching of images is not a triggering event of the instant invention. However, Appellant's Specification teaches where an instructor may control the duration and type of display using a control screen (page 12, lines 26-28) and where instructor overrides the table-driven timeouts used for automatically displaying images (page 13, lines 3-13), but otherwise fails to explicitly define what a triggering event is in either the Specification or the priority documents. Thus, Appellant's argument is unfounded because he clearly describes allowing an instructor to trigger the duration and type of displaying event using control buttons and keys, contradicting his own assertion that Konopka fails to teach such a triggering event.

Appellant argues that Freiberger likewise fails to teach using three or more visual displays or the claimed triggering event; however, as mentioned above, Konopka is relied upon to teach these features and not Freiberger. Thus, it would have been obvious to one of ordinary skill in the art at the time of invention, in light of the teachings of Konopka and common sense, to have used three of the visual displays and instructor-switching function of Konopka with the teachings of Freiberger and Slezak to reveal every limitation of the claims.

Appellant makes statements that seem to argue that Freiberger fails to teach displaying background images in a pattern on one or more visual displays; however, no distinction is made between a background image and any other image; only that specifically selected images provide the background pictures for idle or transition periods when no other activity on the

screens are present (Specification, page 12, lines 21-23). If Appellant is making such an argument, it is not convincing because he defines a background image as any image displayed in an idle state; this is precisely how Freiberger defines a wallpaper image (1:39-67).

Appellant also argues that Freiberger's content display system fails to teach generating a random display of content because the evaluation of a Gaussian probability function is not equivalent to a random function. However, Freiberger teaches scheduling the display of content using a probability function incorporating factors such as the amount of time that has passed since a particular set of content has been displayed (26:52-27:15). The Gaussian function is a stochastic probability function using the evaluated probability function as an argument, determining the likelihood that a set of content will be displayed at the time it is evaluated; not, at Appellant implies, whether it is ever displayed. This is apparent from Freiberger, which also includes the update frequency and duration of display of the content clip in the instructions of the content package file (22:53-23:16). It is well-known that *probability* is the mathematical likelihood that an event will occur; and a *probability function* (or distribution) is the range of values that a random variable may take on. Thus, evaluating a probability function is understood to be evaluating the value of a random variable describing the likelihood a set of content is displayed at the time it is evaluated by the computer's operating system; and as such the function describes the random occurrence of an event. It would be obvious from the teachings of Freiberger to evaluate such a stochastic probability function to randomly determine when, for how long, and where on the display screen such content is displayed, in the system of Konopka, in order to uniformly distribute the display of such content to better optimize a user's attention, so that the user does not get bored of a particular set of content quickly and distract his mind elsewhere.

Appellant also argues that Freiberger fails to teach using the algorithm on three or more visual displays; however, this is irrelevant to using the attention manager of Freiberger in a computer-driven system such as Konopka. Konopka clearly uses one single computer to run multiple displays (4:24-30). Freiberger is not relied upon to teach explicitly what a routineer in the art of computer programming would have known about computers incorporating multiple video cards and displays. It is thus obvious that the algorithm taught by Freiberger would easily be extended to operate wallpapers on multiple displays because computer systems with multiple displays (such as kiosks and security stations) were well known at the time of Konopka and Freiberger; thus this argument is unconvincing.

Appellant further argues that Freiberger is silent as to where a triggering event comprises receiving a command from an operator; however, as above, Appellant admits that Konopka teaches a user's switching between a teacher image, a document image, and a video image, using control buttons and keys. Freiberger teaches where the attention manager is activated and deactivated by explicit direction from the user via a graphical interface (9:30-45 and 28:10-20). This argument is unconvincing because it would be obvious to one of ordinary skill in the art at the times from Konopka and Freiberger, as well as common sense, to merely provide an icon or button to activate the attention manager, so that a user, such as the instructor, might override the computer's display of background images where the flow of the lesson requires it.

Appellant further argues that Konopka and Freiberger fail to teach changing a display of instructional information on less that all of the visual displays; however, Konopka teaches, as above, a triggering event that changes any one of the displays (4:11-24). It is apparent that changing the display on any one of Konopka's displays, such as the document image, constitutes less than all of then. For this reason, Konopka at least teaches the limitation.

II. The rejections of claims 1-4, 42-46, and 49-78 under 35 USC §103(a) in view of Konopka and Freiberger do not teach away from the claimed invention nor does Frieberger destroy the utility of Konopka or vice versa.

Appellant argues that combining elements of Konopka and Freiberger is unobvious because each would destroy the principle operation of the other. However, Konopka teaches a computer system for displaying a teaching presentation, whereas Freiberger teaches a computer algorithm embodied in software medium for selectively displaying information. Merely installing the software medium of Freiberger into the computer system of Konopka requires no great leap of logic or demonstrates a new and unobvious result. Freiberger even teaches the principle of managing the peripheral attention of users (2:3-19). It would not destroy the function of Konopka for teaching students to manage their peripheral attention; indeed, Konopka's images of remote classrooms and the teacher do not seem to destroy the teaching capability of Konopka. Conversely, Freiberger's attention manager scheduling system would merely automate the rotation of such images with instructional images, such as from the document camera, or from other sources such as the Internet. This automated management would be highly beneficial in Konopka as it obviously relieves the teacher from switching images manually at all times. It is unclear how Freiberger would prevent students in each classroom from being able to view other classrooms in Konopka when Freiberger teaches switching image content around in a randomly evaluated manner; the classroom images are, of course, just additional content to manage for Freiberger's algorithm. Thus, Appellant's allegation that such a combination is unsatisfactory for its intended purpose is unconvincing because Freiberger's intended purpose is for managing a user's concentration using content in general, and specifically content, such as weather and news, which is understood to be instructional; Konopka would merely provide some of the instructional content as part of a classroom lesson.

Having advertising be optionally part of a set of content does not teach away from the concept of Freiberger, as Freiberger operates on any type of video or audio content (7:23-52).

III. The rejection of claim 47 under 35 USC §103(a) in view of Konopka, Freiberger, and Slezak teaches every element of the claim.

Appellant argues that Slezak contributes nothing to the above limitations in the context of claim 47. However, no specific argument against the further teachings of Slezak, for merely displaying content in a pattern on the display screen, is presented. Consequently, from the rebuttal provided in the above paragraphs, the teachings of Konopka, Freiberger, and Slezak do in fact teach, suggest, and motivate every element of the claim.

IV. The rejections of claims 2-4, 7, 11, 12, 42-58, 60-66, & 68-78 are proper for the reasons presented above.

Appellant states that all the dependent claims are thus allowable due to alleged deficiencies of Konopka and Freiberger, but presents no specific additional arguments to the merit of the dependents. Consequently, from the above rebuttal, the teachings of Konopka, Freiberger, and Slezak do in fact teach, suggest, and motivate every element of the dependent claims.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Nikolai A Gishnock/

Examiner, Art Unit 3715

Conferees:

/XUAN M. THAI/

Supervisory Patent Examiner, Art Unit 3715

/Gene Kim/

Supervisory Patent Examiner, Art Unit 3711